[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2022-0390; Project Identifier MCAI-2021-00968-T; Amendment 39-22082; AD 2022-12-10]

RIN 2120-AA64

Airworthiness Directives; Dassault Aviation Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Dassault Aviation Model FALCON 7X airplanes. This AD was prompted by a report of a weak point identified in the Falcon 7X 'EASy' avionics architecture, which, coupled with theoretical generic input/output (I/O) card failure, could lead to misleading data on display units. This AD requires revising the existing airplane flight manual (AFM) to provide emergency procedures for inconsistent or unreliable flight data and emergency and abnormal operations procedures for the GEN I/O internal module failure, and revising the operator's existing FAA-approved minimum equipment list (MEL) items for the multi-function probe heating, air data, and inertial reference systems, as specified in a European Union Aviation Safety Agency (EASA) AD, which is incorporated by reference. This AD also requires revising the existing AFM to incorporate additional information in the emergency procedures. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a

certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For material incorporated by reference (IBR) in this AD, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email ADs@easa.europa.eu; Internet www.easa.europa.eu. You may find this IBR material on the EASA website at https://ad.easa.europa.eu. You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available in the AD docket at www.regulations.gov by searching for and locating Docket No. FAA-2022-0390.

Examining the AD Docket

You may examine the AD docket at www.regulations.gov by searching for and locating Docket No. FAA-2022-0390; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Tom Rodriguez, Aerospace Engineer, Large Aircraft Section, FAA, International Validation Branch, 2200 South 216th St., Des Moines, WA 98198; telephone 206-231-3226; email Tom.Rodriguez@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

EASA, which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2021-0197, dated August 23, 2021 (EASA AD 2021-0197) (also referred to as the MCAI), to correct an unsafe condition for all Dassault Aviation

Model FALCON 7X airplanes. The FAA notes that Model FALCON 7X airplanes with Dassault modification M1000 incorporated are commonly referred to as "Model FALCON 8X" as a marketing designation.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all Dassault Aviation Model FALCON 7X airplanes. The NPRM published in the *Federal Register* on April 5, 2022 (87 FR 19653). The NPRM was prompted by a report of a weak point identified in the Falcon 7X 'EASy' avionics architecture, which, coupled with theoretical generic I/O card failure, could lead to misleading data on display units. The NPRM proposed to require revising the existing AFM to provide emergency procedures for inconsistent or unreliable flight data and emergency and abnormal operations procedures for the GEN I/O internal module failure, and revising the operator's existing FAA-approved MEL items for the multi-function probe heating, air data, and inertial reference systems, as specified in EASA AD 2021-0197. The NPRM also proposed to require revising the existing AFM to incorporate additional information in the emergency procedures.

The FAA is issuing this AD to address misleading data on display units, which could reduce safety margins and lead to increased pilot workload, and consequent reduced controllability of the airplane. See the MCAI for additional background information.

Discussion of Final Airworthiness Directive

Comments

The FAA received no comments on the NPRM or on the determination of the cost to the public.

Change to the Applicability

The FAA has revised paragraph (c) of this AD to exclude airplanes having Dassault modification M2091 embodied in production from the applicability because

those airplanes are not affected by the identified unsafe condition. Modification M2091 upgrades the airplane avionics to the "EASY III – 4th CERT" standard that improves the Falcon 7X EASy avionics architecture. This change to the applicability corresponds to EASA AD 2022-0145, dated July 12, 2022 (EASA AD 2022-0145), which supersedes EASA AD 2021-0197. EASA AD 2022-0145 also requires an additional modification for certain airplanes. The FAA is considering further rulemaking to mandate the new modification specified in EASA AD 2022-0145.

The FAA has also added Note 1 to paragraph (c) of this AD to explain that Model FALCON 7X airplanes with Dassault modification M1000 incorporated are commonly referred to as "Model FALCON 8X" as a marketing designation.

Conclusion

The FAA reviewed the relevant data and determined that air safety requires adopting this AD as proposed with the changes described previously. Except for minor editorial changes, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products.

Related Service Information Under 1 CFR Part 51

EASA AD 2021-0197 specifies procedures for revising the existing AFM to provide emergency procedures for inconsistent or unreliable flight data and emergency and abnormal operations procedures for the GEN I/O internal module failure, revising the operator's existing MEL for the air data and inertial reference systems, and revising the operating suitability manual. This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Interim Action

The FAA considers this AD interim action. If final action is later identified, the FAA might consider further rulemaking then.

Costs of Compliance

The FAA estimates that this AD affects 121 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated costs for required actions

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
2 work-hours X $85 per hour = $170	$0	$170	$20,570

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the

national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

(1) Is not a "significant regulatory action" under Executive Order 12866,

(2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2022-12-10 Dassault Aviation: Amendment 39-22082; Docket No FAA-2022-0390; Project Identifier MCAI-2021-00968-T.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to all Dassault Aviation Model FALCON 7X airplanes, certificated in any category, except airplanes having Dassault modification M2091 embodied in production.

Note 1 to paragraph (c): Model FALCON 7X airplanes with Dassault modification M1000 incorporated are commonly referred to as "Model FALCON 8X" as a marketing designation.

(d) Subject

Air Transport Association (ATA) of America Code 34, Navigation.

(e) Unsafe Condition

This AD was prompted by a report of a weak point identified in the Falcon 7X 'EASy' avionics architecture, which, coupled with theoretical generic input/output (I/O) card failure, could lead to misleading data on display units. The FAA is issuing this AD to address this condition, which could reduce safety margins and lead to increased pilot workload, and consequent reduced controllability of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Requirements

Except as specified in paragraphs (h) and (i) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, European Union Aviation Safety Agency (EASA) AD 2021-0197, dated August 23, 2021 (EASA AD 2021-0197).

(h) Exceptions to EASA AD 2021-0197

(1) Where EASA AD 2021-0197 refers to its effective date, this AD requires using the effective date of this AD.

(2) Whereas EASA AD 2021-0197 requires operators to "inform all flight crews, and, thereafter, ensure that each pilot has performed the training and operate the aeroplane accordingly," this AD does not require those actions.

(3) Where paragraph (3) of EASA AD 2021-0197 specifies to "implement the instructions of the MMEL-CP," this AD requires revising the operator's existing FAA-approved minimum equipment list (MEL) to incorporate that information ("the MMEL-CP" as specified in EASA AD 2021-0197).

(4) Paragraph (4) of EASA AD 2021-0197 does not apply to this AD.

(5) The "Remarks" section of EASA AD 2021-0197 does not apply to this AD.

(i) Airplane Flight Manual (AFM) Revision

Within 2 months after the effective date of this AD, revise the applicable existing AFM to incorporate the information specified in figure 1 to paragraph (i) of this AD after sub-sub-section 2-200-70, Emergency Procedures, ADS with IRS miscompare, of sub-section 2-200, Emergency Procedures, of Section 2 - Emergency Procedures.

Figure 1 to paragraph (i) – *Training Areas of Special Emphasis for pilot (TASEp) Tp-118-EZII Info for AFM*

TASEp Tp-118-EZII Information

1) Potentially unreliable information exists on the iPFD and/or HUD
2) Aircraft must be flown by reference to SFD
3) Aircraft trajectory must be monitored on the iNAV
4) The iNAV may have misleading/confusing representations
5) Before using iNAV for aircraft trajectory monitoring, LH pilot side is to be selected
6) Pilot side selection has impacts on task sharing between Pilot Flying and Pilot Monitoring
7) Presence of both ADS and IRS CAS messages requires that newly developed single emergency procedure must be performed instead of performing separate ADS and IRS emergency procedures
8) There may be a time delay of up to 10 secs between the ADS and IRS MISCOMPARE messages during critical phases of flight
9) The special single emergency procedure is not available on ECL (paper checklist from AFM or CODDE2 is required)
10) Crew workload in this failure situation will be high

(j) Additional AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs):* The Manager, Large Aircraft Section, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the Large Aircraft Section, International Validation Branch, send it to the attention of the person identified in paragraph (k) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov. Before using any approved AMOC, notify your

appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) *Contacting the Manufacturer:* For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, Large Aircraft Section, International Validation Branch, FAA; or EASA; or Dassault Aviation's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

(k) Related Information

For more information about this AD, contact Tom Rodriguez, Aerospace Engineer, Large Aircraft Section, FAA, International Validation Branch, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206-231-3226; email Tom.Rodriguez@faa.gov.

(l) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) European Union Aviation Safety Agency (EASA) AD 2021-0197, dated August 23, 2021.

(ii) [Reserved]

(3) For EASA AD 2021-0197, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email ADs@easa.europa.eu; Internet www.easa.europa.eu. You may find this EASA AD on the EASA website at https://ad.easa.europa.eu.

(4) You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this material that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fr.inspection@nara.gov, or go to: www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued on July 21, 2022.

Christina Underwood, Acting Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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